

### **REMARKS/ARGUMENTS**

Claims 1-43, 58-105, 107, 108, 110-129, 132, 134-142, 144, and 145 are pending. Claims 4-9, 11-13, 24-26, 29-32, 58, 65, 66, 69, and 111-119 have been withdrawn, so the claims being examined are claims 1-3, 10, 14-23, 27, 28, 33-43, 59-64, 67, 68, 70-105, 107, 108, 110, 120-129, and 132, 134-142, 144, and 145. In the Office Action being replied to, claims 68 and 134-138 were objected to, while claims 1-3, 10, 14-23, 27, 28, 33-43, 59-64, 67, 70-105, 107, 108, 110, 120-129, and 132, 139-142, 144, and 145 were rejected.

In this Response, claims 134-138 are being cancelled, and claims 1, 33, 35, 37, 59, 60, 61, 63, 64, 68, 71-86, 125, 132, 139, 142, 144, and 145 are being amended.

#### **Applicants' Representatives**

The Applicants' last communication, which was transmitted to the PTO on February 27, 2006 and filed in the PTO on March 12, 2006, contained a Power of Attorney appointing the practitioners at Customer Number 021569 as the Applicants' representatives, and a request that the correspondence address for this application be changed to the address associated with that Customer Number. Neither the Power of Attorney nor the request for change of correspondence address appears to have been processed by the PTO. Accordingly, the pending Office Action was mailed to the Applicants' former representatives. The Applicants respectfully request the Examiner's help in getting the PTO to process the Power of Attorney and change of correspondence request included in the Applicants' last communication.

#### **Request for RCE**

Applicants gratefully acknowledge that their request for continuing examination was accepted.

#### **Sequence Compliance**

Applicants' gratefully acknowledge that the amendment to the specification filed September 10, 2003 has been entered. As the Examiner points out in the pending Office Action, Figure 2A in that amendment contains an amino acid sequence. Accordingly, in this Response

Applicants are submitting a sequence listing in accordance with the requirements of 37 CFR §§ 1.821-1.825.

### Objections

Claims 134-138 have been objected to under 37 CFR § 1.75 as being in improper form because those claims depend from cancelled claim 133. Applicants are cancelling those claims, thus removing the basis for this objection.

Claim 68 has been objected to under 37 CFR § 1.75 as being in improper form because it depends on withdrawn claim 65. To overcome this objection, Applicants have amended claim 68 so that it depends on claim 59.

### Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 60, 61, 63, 64, 71-86, 125, 133, and 138 have been rejected under the second paragraph of 35 U.S.C. § 112 as allegedly being indefinite. The basis for this rejection is that those claims lack antecedent basis for the term “the results of tests.” As the Examiner suggested, all of those rejected claims (except for claims 133 and 138 which have been cancelled) have been amended so that they refer to “the results of *in vitro* assays.”

### Rejections under 35 U.S.C. § 103

#### 1. Rejections based on the combination of Goto and Antman

Claims 1-3, 10, 14-23, 27, 28, 33-43, 59-64, 70, 76, 78, 89-91, 93, 94, 97-105, 120, 121, 124, 125, 127-129, 132, and 139-142 stand rejected as allegedly being unpatentable over the combination of Goto et al., “LIGAND: chemical database for enzyme reactions,” BIOINFORMATICS, Vol. 14 no. 7, pgs. 591-599 (1998) (“Goto”) and Antman et al., “A Comparison of Results of Meta-analyses of Randomized Control Trials and Recommendations of Clinical Experts,” JAMA, Vol. 268, No. 2, pgs 240-248 (July 8, 1992) (“Antman”).

As the Applicants have stated in their previous communications, the Goto reference describes a systems of databases designed to “describe, utilize and predict functional aspects of living systems.” Goto pg. 597, col. 2, lines 17-18. That is why the “compounds” discussed in Goto appear to be limited to compounds that are inherently present in living systems and that play “important functional roles in living cells. Goto, pg. 592, last full sentence of

column 1. The Antman reference provides an overview of the results of a number of studies (randomized control trials, or RCTs) of treatments for myocardial infarction. Antman pg. 240. In contrast, the current application describes databases that are useful for drug discovery and development. Original Application pg. 2 lines 10-15. Neither Goto nor Antman, nor the combination of Goto and Antman, appear to disclose, or even suggest, the use of multidimensional databases for drug discovery and development.

The gist of the § 103 rejection appears to be that the broadest interpretation of the claims could encompass databases that are obvious in light of the combination of Goto and Antman. The Examiner also stated that many of the Applicants' arguments in the last response were directed toward limitations that are not in the claims. For example, the Examiner states that the concept of "externally introduced chemical compounds," as opposed to compounds that are inherently present in living systems, are not recited in the claims. Applicants' addition of the term "*in vitro* assays" into the claims was intended to provide such differentiation but, as the Examiner noted, Goto discloses that it is possible to study naturally occurring compounds in *in vitro* assays. Thus the amendments made to the claims in this Response are intended to differentiate the drug discovery databases described in the pending application from the Goto and Antman references. The first amendment reintroduces the concept of the *in vitro* assay being part of a "screening" process. As explained in the specification, a screening process consists of determining whether the compounds in a large chemical "library" are active against a particular target. See, e.g. Original Application pg. 3 lines 4-8 and pg. 4 line 8 – pg. 5 line 10. The second amendment introduces the concept of inputting data for a new compound, i.e. a compound that is not in the compound database, and having the computer system collect the data that is relevant to determining whether that new compound has the potential for being a drug. Support for the second amendment can be found throughout the specification. See, e.g. Original Application pg. 31 line 16 - pg. 32 line 18. Applicants do not believe that the combination of Goto and Antman disclose or suggest the concept of correlating information from a variety of different sources in such a way as to evaluate the potential of a new compound as a drug.

The two amendments have been made to all of the rejected independent claims, namely claims 1, 33, 35, 37, 59, 132, 139, and 142.. Applicants submit that all of those amended independent claims are patentable over the combination of Goto and Antman. If the independent

claims are patentable, then the narrower dependent claims will also be patentable over the combination of Goto and Antman.

## 2. Rejections based on the combination of Goto, Antman, and Liu

Claims 71-75 and 80 stand rejected as allegedly being unpatentable over the combination of Goto, Antman, and Liu. The rationale behind this rejection appears to be that the independent claims upon which the rejected claims depend are unpatentable over the combination of Goto and Antman, while the additional limitations in the rejected claims are unpatentable once Liu is taken into account. Applicants assert that if the independent claims are patentable over Goto and Antman, then the rationale behind this rejection no longer applies. Therefore in light of the amendments made to the independent claims, Applicants assert that claims 71-75 and 80 are now in condition for allowance.

## 3. Rejections based on the combination of Goto, Antman, and Ogata

Claims 67, 77, 79, 81-88, 95, 108, 110, 122, 123, 144, and 145 stand rejected as allegedly being unpatentable over the combination of Goto, Antman, and Ogata. The rationale behind this rejection appears to be that the independent claims upon which the rejected claims depend are unpatentable over the combination of Goto and Antman, while the additional limitations in the rejected claims are unpatentable once Ogata is taken into account. Please note that this analysis applies to claims 144 and 145 even though they are independent because those claims are formerly dependent claims that were simply rewritten in independent form. Applicants assert that if the independent claims are patentable over Goto and Antman, then the rationale behind this rejection no longer applies. Therefore in light of the amendments made to the independent claims, Applicants assert that claims 67, 77, 79, 81-88, 95, 108, 110, 122, 123, 144, and 145 are now in condition for allowance.

## 4. Rejections based on the combination of Goto, Antman, and Witzmann

Claims 96 and 107 stand rejected as allegedly being unpatentable over the combination of Goto, Antman, and Witzmann. The rationale behind this rejection appears to be that the independent claims upon which the rejected claims depend are unpatentable over the

combination of Goto and Antman, while the additional limitations in the rejected claims are unpatentable once Witzmann is taken into account. Once again, Applicants assert that if the independent claims are patentable over Goto and Antman, then the rationale behind this rejection no longer applies.

5. Rejections based on the combination of Goto, Antman, and Witzmann

Claims 92 and 126 stand rejected as allegedly being unpatentable over the combination of Goto, Antman, and Schena. The rationale behind this rejection appears to be that the independent claims upon which the rejected claims depend are unpatentable over the combination of Goto and Antman, while the additional limitations in the rejected claims are unpatentable once Schena is taken into account. Once again, Applicants assert that if the independent claims are patentable over Goto and Antman, then the rationale behind this rejection no longer applies.

**Conclusion**

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

Respectfully submitted,



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Signed: \_\_\_\_\_

